

WE CLAIM:

1. A method of inhibiting GVHD in a mammal requiring DLI, the method comprising
- 5 a) contacting the donor lymphocytes to be infused with an aqueous solution containing a therapeutically effective amount of LLME *ex vivo*;
- b) eliminating selective cytotoxic T-cells;
- c) infusing said donor lymphocytes into said mammal; and
- d) inhibiting GVHD.
- 10 2. The method of **Claim 1**, wherein said mammal requires DLI following allogeneic T cell-depleted HSC.
- Sub A1
3. The method of **Claim 1**, wherein said infusing of said donor lymphocytes into
- 15 said mammal occurs after donor HSC engraftment.
4. The method of **Claim 1**, wherein said mammal is a human.
5. A method of inhibiting GVHD in a mammal requiring transplant of CD34<sup>+</sup> stem cells, said method comprising
- 20 a) separating the HSC to be infused into CD34<sup>+</sup> and CD34<sup>-</sup> fractions;
- b) contacting said CD34<sup>-</sup> HSC fraction with an aqueous solution containing a therapeutically effective amount of LLME *ex vivo*;
- c) eliminating selective cytotoxic T-cells in the CD34<sup>-</sup> HSC fraction
- 25 d) co-administering a therapeutically effective amount of said LLME-treated CD34<sup>-</sup> HSC fraction with said CD34<sup>+</sup> HSC fraction; and
- e) inhibiting GVHD.
- Sub A2
- Add A3